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Physical Planning in the Netherlands

1. General Introduction



PHYSICAL PLANNING
IN
THE NETHERLANDS

1. General Introduction

*Compiled by the Government Physical Planning Service
and the Information Department of the
Ministry of Housing and Building*

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Nature's Endowment

Throughout the world, the issues underlying the processes of physical planning arise from the interplay of the influences exerted by soil, climate and population. The same is true of Holland, but in a small country such as this, the difficulties are accentuated.

Climate

This cannot be blamed entirely on the *climate*. The country is situated in the temperate zone (50.5°–53.5° N) and enjoys a sea climate, that is to say it has moderate winters and cool summers – partly through the effects of the North Atlantic drift. Agriculture and sea-going shipping benefit from this – the large sea-ports are permanently ice-free (see Fig. 1 for the January isotherm for 0° C.). So much the greater, then, is the influence of the other two factors, population and soil.



..... January isotherm for 0° C.

Figure 1

Land reclamation in the Netherlands



Figure 2

Soil

We, in Holland, are somewhat proud of our *soil*, since it is largely the result of our own efforts. There is, of course, an element of exaggeration in the renowned statement of a certain Frenchman that 'God created the world, with the exception of Holland, which was created by the Dutchmen themselves'. But it remains the strict truth that large tracts of our soil today are the fruit of our centuries-old struggle against the water (Fig. 2), and that still larger areas are maintained in habitable condition only by an ingenious system of civil engineering works and by the care and attention paid to the country's hydraulic situation. At its deepest, the surface of these tracts of country is 21' 8" below sea level (Figs 3 and 4a).

But apart from giving rise to a certain amount of pride, all this is a source of constant concern for our people, particularly under abnormal circumstances. World War II, as well as the flood disaster of February 1953 provided us with opportunities of experiencing this to the full. This led to the Delta Plan, within the framework of which large-scale works are being carried out

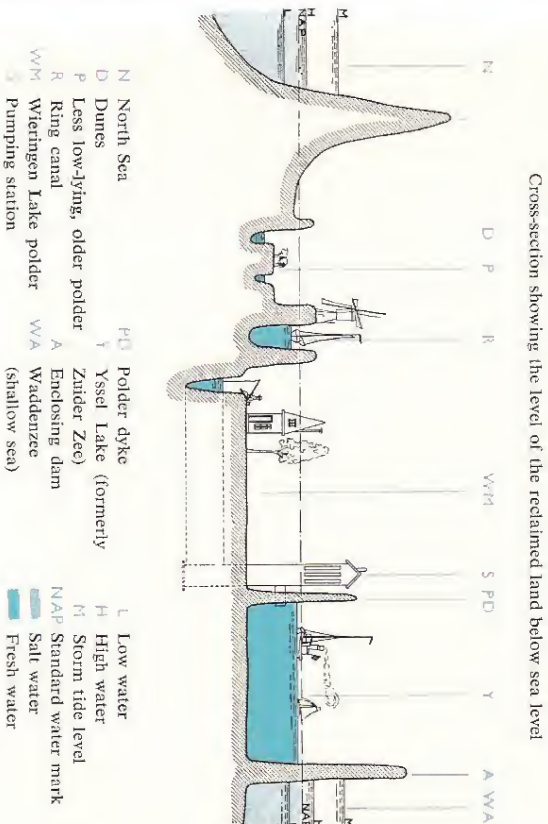
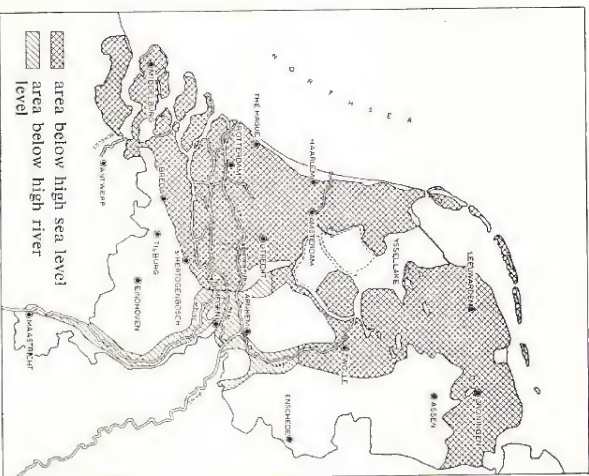
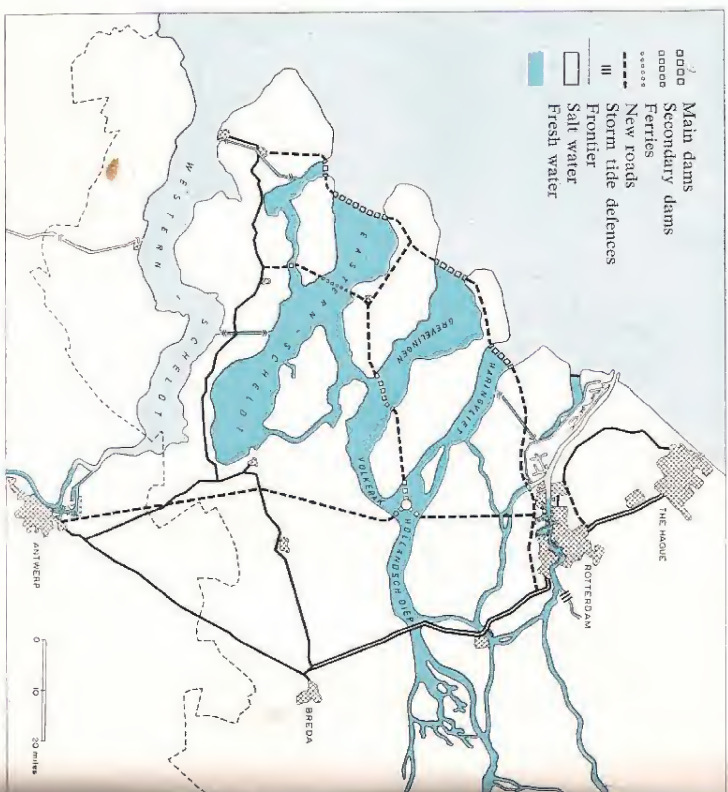


Figure 3



Relation to sea level of the Netherlands

Figure 4a



The Delta Plan

Figure 4b

to increase the safety of the country, particularly in the south-west (Fig. 4b). One such project is the enclosing of the estuaries between the New Waterway and the Western Scheldt. In fact a start had already been made with this in 1950 by the damming-up of the Brielse Maas.

The Government has further decided to close off the Lauwerszee, an inlet of the Waddenzee in the northern part of the country on the confines of the provinces of Groningen and Friesland. The dam to be constructed will be completed round about 1967, and is shown in the maps of this brochure by means of a dotted line. It will result in a shortening of the coast line, and impoldering will provide land for agricultural and recreative purposes.

A few figures:

Total area of Holland (1959)	10,088,000 acres
Total water area	1,841,000 acres
Total land area	8,247,000 acres
Subject to flooding if sea and river dykes were lacking	4,197,000 acres
Reclaimed since the 13th century	1,534,000 acres
Inundated during World War II, and re-drained since	564,600 acres
Inundated in February 1953 and re-drained since	392,700 acres

The problem of keeping the water out is attended by the equally important one of keeping the salt out. By every possible means – via sea arms, estuaries and locks, as well as via the movement of subsoil water – salt is invading the coastal areas of the Netherlands. The issue affects drinking water for man and beast and even more the existence of agriculture, particularly market gardening, for which certain areas in the west of the country (e.g. the well-known 'Westland') constitute an important centre. Pumping surplus from one polder alone – the Haarlemmermeer – yields some 50,000 tons of chlorine annually. One of the results of the Delta Plan is that gradually the salt water in this area is being driven back.

Finally, a good deal of the polder country is also beset with problems connected with the soil itself. Not so much as regards its cultivation – for here the soil is in fact very fertile – but for human settlement and for the traffic: difficult and costly embankments for building sites, roads, railways, airfields, etc. and expensive methods of foundation: in Amsterdam, for instance, every building has to be supported on piles 42 to 60 feet long.

Distribution of population in Europe

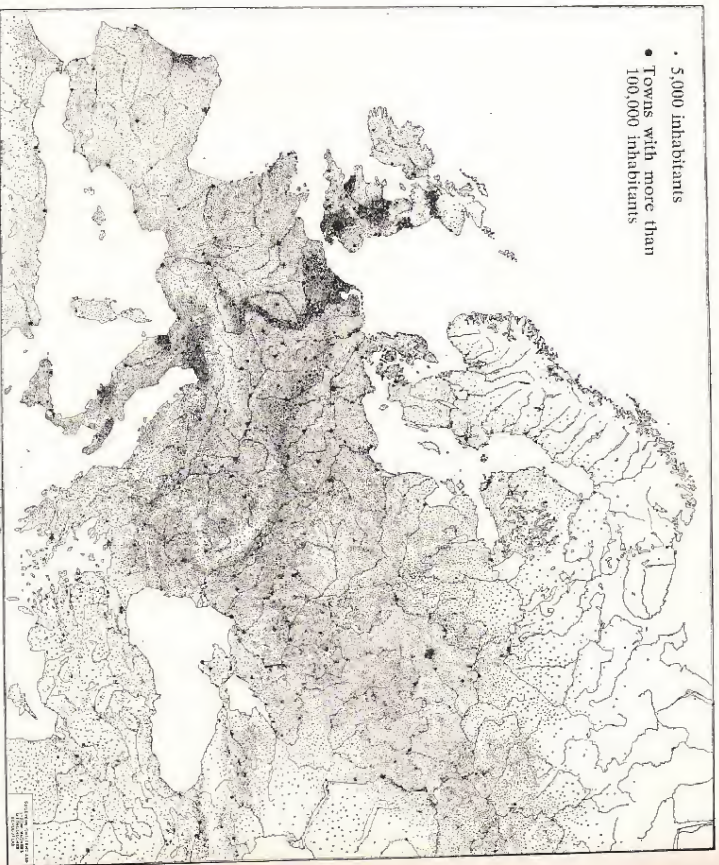


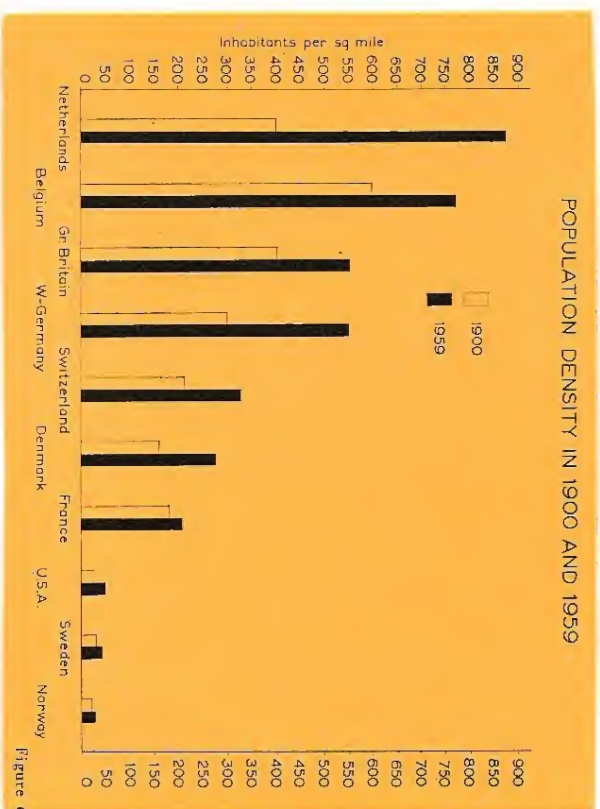
Figure 5

Population

Even so, all this would not make things so very difficult, were it not for the density and uneven distribution of the population. The population map for Europe (Fig. 5) shows clearly that Holland is one of the most densely populated areas of this continent. In Western Europe, the Netherlands are at the head of the list, a fact demonstrated by the following figures, to which those for the U.S.A. have been added for purposes of comparison:

Country	Population (1959) x 1000	Surface area in square miles	Density per square mile
The Netherlands	11,346	12,981	874
Belgium	9,104	11,779	773
Great Britain	51,985	94,215	552
Western Germany	52,785	95,737	551
Switzerland	5,240	15,941	329
Denmark	4,547	16,619	274
France	45,097	212,822	212
Sweden	7,454	173,622	43
Norway	3,556	125,064	28
U.S.A.	177,700	3,615,207	49

Holland's dense population is the result of two factors: the scarcity of land, and the continuous and still continuing growth of the native population (2.6 million in 1829, 5 million in 1899, and 11.5 million in 1960). Whilst in most other countries growth has slowed down, the Dutch people have maintained a high rate of increase throughout. On the one hand, this is caused by Holland's relatively high birth rate – 21.3 ‰ in 1959 – and on the other, by its very favourable death rate, which is one of the lowest in the world – 7.6 ‰ in 1959.



Distribution of population in the Netherlands

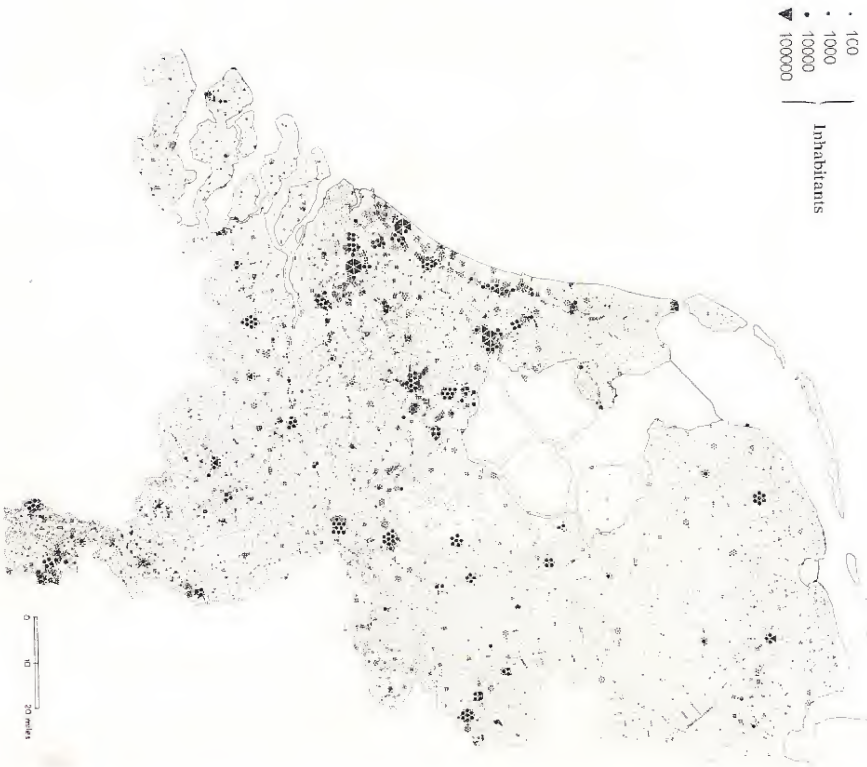


Figure 7

Figure 6 shows the population densities of the above-mentioned countries and how these densities have increased over the last sixty years. It appears that only a country like the United States challenges us in this respect. If the United States were as densely populated as the Netherlands there would be more than 2,600,000,000 Americans (roughly the total world population), instead of about 180,000,000 as at present. But during the period 1900–1960 the rate of increase of the population of the United States was higher than in Holland (137.6% against 123.7%).

Unless events should falsify the prediction, a considerable further increase in the Dutch population is in the offing. In practically all the neighbouring countries, the net reproduction factor is below unity; in other words, the population is showing a tendency to decrease. In Holland, on the other hand, it is considerably above it, indicating a powerful inclination towards growth (1.49 in 1959). Consequently the period 1960–1980 is expected to show an increase of the population from 11.5 to about 14 millions, while a further rise to 18–19 millions in the year 2000 is by no means precluded.

Where are they all going to live? If the chart of the distribution of population according to the 1947 census (Fig. 7) is compared with the map showing the districts below sea level (Fig. 4a), the surprisingly large proportion of the population concentrated in the low-lying polder country of western Holland becomes apparent. The fact is that practically half the total population is concentrated in this region, which constitutes only $\frac{2}{9}$ th of the whole country. Holland's large cities are to be found there – Amsterdam with 870,000 inhabitants, Rotterdam with 730,000 and The Hague with 600,000. The great sea-ports are also to be found there; there too lies the centre of gravity of Holland's industrial development and commercial traffic. It is therefore essential to promote as much as possible the development of the parts of the country and thus avoid further aggravation of the west's difficulties. It is worthy of note that the three large cities together with their spheres of influence and taken moreover with a number of smaller cities like Utrecht, Gouda, Delft, Leyden, Haarlem, Hilversum and other dormitory towns in the 'Gooi' district, and Amersfoort, describe a wide circle to form the 'Randstad Holland' ('Annular City of Holland'). Particulars are shown in figures 8a and b. From certain points of view, its existence is to be considered an advantageous form of decentralization; it has, at any rate, saved Holland from having to grapple with the problem of overgrown cities, thanks to the naturally evolved distribution of tasks between Amsterdam (capital and commercial city), Rotterdam (major sea-port), and The Hague (governmental and residential city). A further development of the 'Randstad Holland', with its population of more than 4 million inhabitants, would involve difficult planning problems. They are dealt with in a report regarding the development of the west of the country, delivered to the Government in 1958 (see page 35).

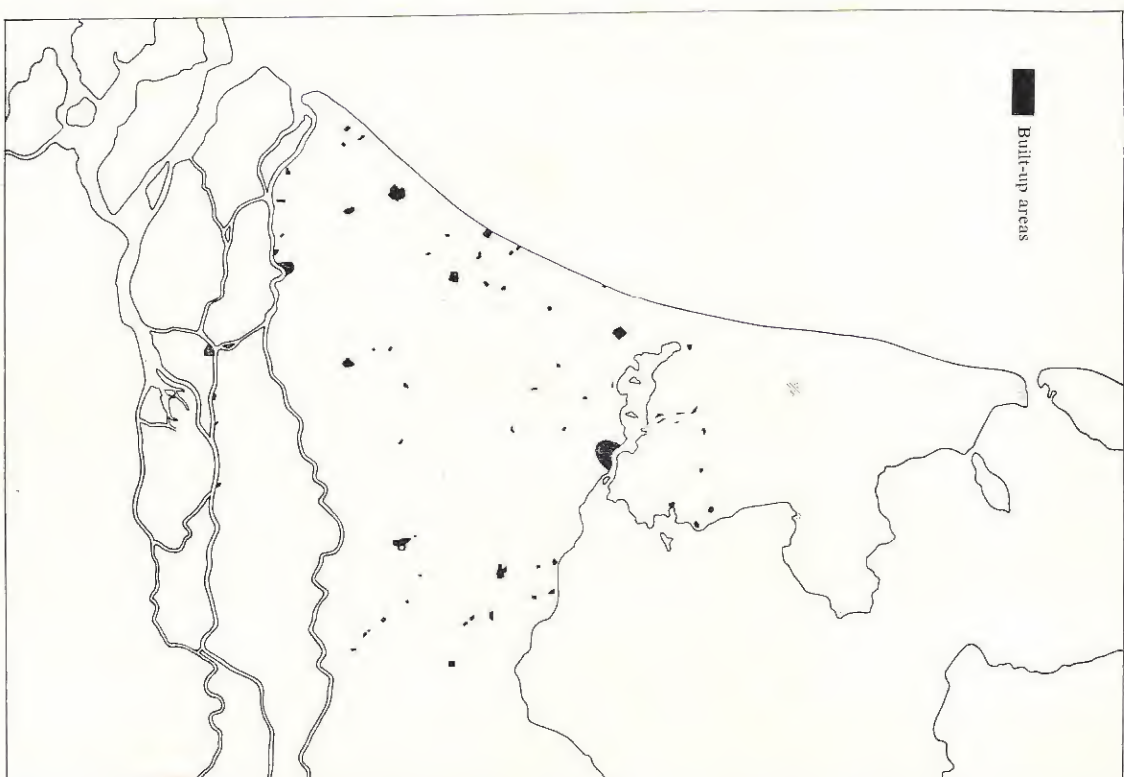


Figure 8a

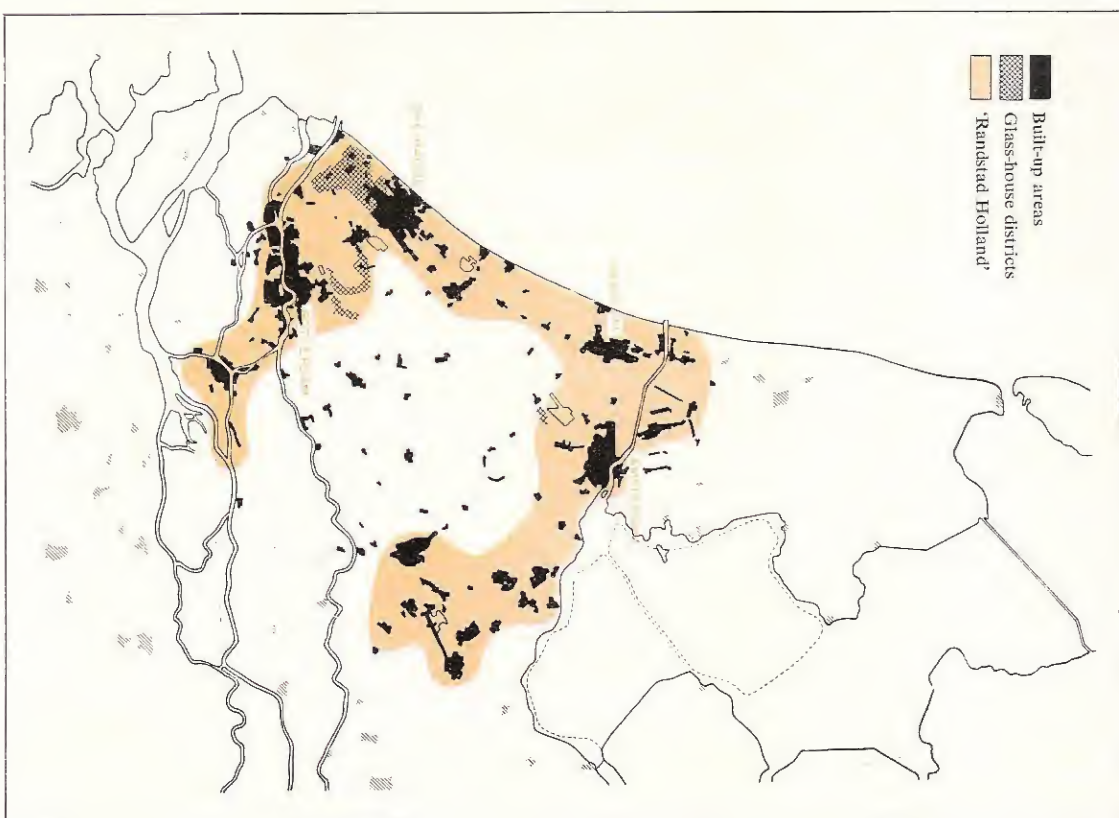


Figure 8b

The struggle for a scarce commodity - land

Scarcity leads to tension.

Compare, for instance, the surveys of main land uses in the Netherlands in 1900 and 1950 (Fig. 9). It is eloquent of the struggle for more agricultural land, resulting in the large increase of 890,000 acres. This has been won from water (150,000 acres) and in particular waste land (1,130,000 acres). But on the other hand building development and its ancillaries (industry, roads, canals, airfields, etc.) have attacked strongly and captured some of the gains, to the extent of 400,000 acres. The possibilities are not inexhaustible, however. Land under cultivation (without woodland) now covers 70 per cent of the country's total area, excluding water. This figure gives Holland practically the highest percentage in the world. Waste land – which, in any case, serves other purposes too, such as sea retention (dunes), water collection

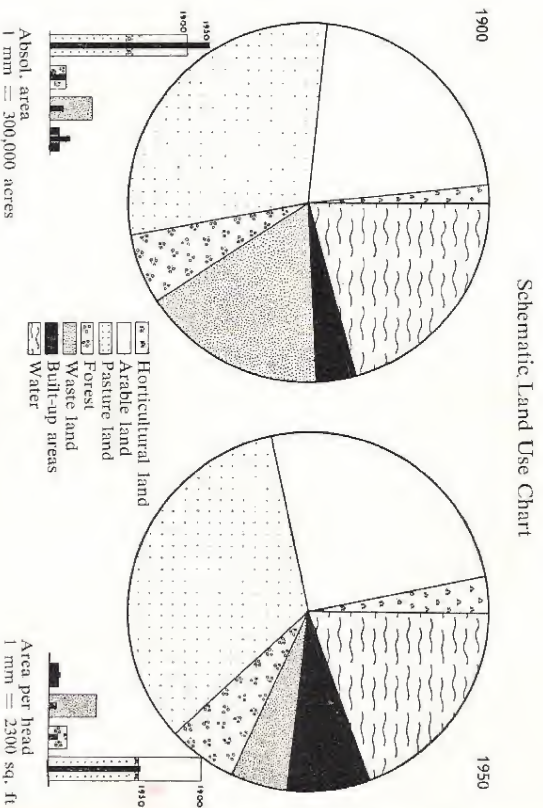


Figure 9

areas, and recreation – can provide very little more now; and it will not be possible to wrest more than some 565,000 acres from the water in this century. Moreover, a good deal of this will have to be set off against the imroads made by building development (in recent years this area has been fluctuating around 11,000 acres a year).

Expressed in terms of the share per inhabitant, the tension in the situation becomes still clearer. Despite all efforts to increase agricultural land there has been a decrease from 1.13 to 0.6 acres per head of the population, as compared with 0.64 acres in Western Germany, 0.98 in the United Kingdom, 1.88 in France and 2.75 in the U.S.A. Even more striking are the diminishing areas of woodland and waste land, which are particularly the areas important for mass recreation. The area available per head for this latter purpose has become very small indeed.

Under these circumstances, physical planning in the Netherlands takes on to a very high degree the characteristics of balancing conflicting claims to land use. Land has become the subject of a scarcity economy, which in all probability will become more pronounced as the population continues to increase. Consequently, physical planning has the primary task of confronting claims to the land from this point of view with each other and striving as far as possible to achieve successful co-ordination between them.

Agricultural Land Use (1960)

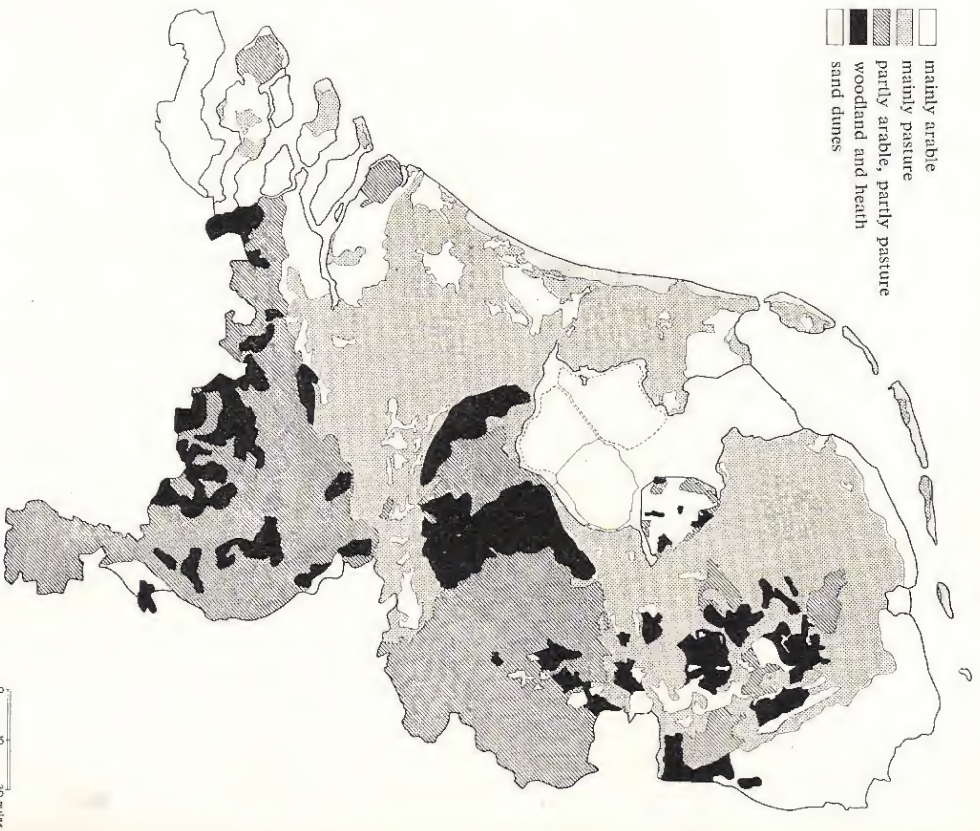


Figure 10

The separate aspects of planning

Such co-ordination, to be successful, will have to create the most favourable possible conditions for the millions of Dutch people who are going to require houses, food, employment and recreation during the coming decades. This means that the problem of means of livelihood is paramount. The following table shows how this situation has evolved during the last half century (up to the latest census of industrial enterprises in 1950).

	1900	1950	
Total population	5,000,000	10,000,000	
Total labour force	1,924,000	4,085,000	100 %
Employed in:			
agriculture	593,000	679,000	17 %
industry	655,000	1,592,000	39 %
trade, transport and other services	676,000	1,814,000	44 %

Agriculture

As regards agriculture reference should first of all be made to the overall review of present-day land use depicted in Fig. 10. Agricultural land in the Netherlands now covers an area of some 5.6 million acres, as against approximately 5.5 million acres in 1900. This increase — despite the considerable calls on land for urban extension, road construction, airfields, etc. — was due at first to reclamations and later in particular to the creation of new land in the Yssel Lake. Thanks to these (and other) acquisitions of land the area of farmland will have risen to about 6.4 million acres by about 1980; the further polders to be created in the Yssel Lake will in themselves add a gross area of 246,000 acres of excellent agricultural land, to be farmed according to modern methods, to the soil of Holland.

The principles which are followed in these new polders and which aim at a high degree of rationalization and mechanization, cannot be fully applied on the 'old land'. But there, too, endeavours are made to achieve modernization in plans for agricultural improvement. If the economic position of Dutch



Figure 11

farming is to be preserved and if possible strengthened vis-à-vis other countries, reduction of the cost prices of agricultural produce is a prime requisite. It is conceivable that, in view of this, marginal farmland will have to be re-allotted in the long run to other forms of land use (e.g. afforestation or re-creation).

The present trend has already led to an increasing extent to labour being channelled away from the agricultural sector (see the table on page 17; in the period 1960-1980 a further drop of 5 to 10 % is forecast). This has resulted in a decline in the population of the agricultural service centres and a rapid loss of function, particularly in the smaller centres.

From the point of view of physical planning the problem of concentration asserts itself throughout the whole farming countryside: it constitutes one of the elements of the omnipresent 'scale enlargement', which is also manifested in larger-scale farming, a wider-mesh road network, etc. For the latest polder in the Yssel Lake (Eastern Flevoland) the plan was modified to suit this development by a reduction of the number of centres originally planned from 11 to 5. On the old land agricultural improvements are in particular being fostered within the framework of re-allotment plans (for agricultural holdings). These are developing more and more into complete agricultural reconstruction plans for areas sometimes as large as 25,000 acres. Measures for increasing the size of farms, better allotment and opening up of the land, improved water economy, etc., go hand in hand in the modern framework of these plans with slum clearance, better social facilities and by and large an increase in the standard of living in the country. Increasing the size of farms has been made easier by the migration of farmers to the new Yssel Lake polders.

Of the 5.6 million acres of farmland, some 3.7 million have to a greater or lesser extent to be repurposed. A long-term plan has been drawn up for this purpose. Since 1924 310,000 acres have been re-allotted, and 500,000 acres are at present in the process of being dealt with. Application has been made for the re-allotment of 2.95 million acres (see Fig. 11). At the same time, it is becoming a matter of increasing urgency that the available agricultural land (particularly the good-quality land) should be retained as far as possible.

A special problem is created in this connection by market-gardening land, found in the periphery expansion area of many towns, and a subject of constant conflict between the interests of food supply and housing. A striking example of this is the district to the south-west of The Hague, where the brick-built town is continually clashing with the 'glass town' formed by the intensive hot-house cultivation of the 'Westland' area (see Fig. 8b).

Industry

The table on page 17 shows the increasing significance of industry; this trend will become still more pronounced in the near future. Besides agriculture, commerce and transport have long been Holland's principal industrial occupations. However, modern farming prevents agriculture not only from contributing further to the provision of new jobs for the greatly increased population, but even from retaining its own labour force (see page 19). Intensified industrialization is therefore essential to the country.

Some of the industries to be established are tied to the localities where minerals are to be found; this applies, for instance, to coal mining and the chemical plants dependent on it. A new mining centre might be established in the vicinity of Roermond (in the province of Limburg).

Side by side with the mining industry, mention should be made of the production of mineral oil. After the sinking of the first producing well in the north-east of the country, in 1943, it was found possible after the liberation to increase production in this part of the country and later in the west too (in the vicinity of Rotterdam and The Hague), to such an extent that it already covers approximately 25 per cent of the total domestic consumption of oil products. Nevertheless, careful planning has kept the inevitable encroachment upon the rural landscape by installations, house building, etc. within very acceptable limits. The oil produced is processed in the large refineries below Pernis in the Rotterdam port area. Since 1952 natural gas has been produced in the north-east and recently in the west of the country.

The latest development in the field of minerals is the foundation of a soda industry at Delfzijl, based among other things on the salt present in the soil of the north of the country.

Important industries have grown not only near the mining areas. Since time immemorial, the west has acted like a powerful magnet on industry, owing to both the concentration of trade routes and the density of the population, greatly facilitating the recruitment of labour. This is particularly the case in the areas surrounding the great sea-ports of Amsterdam and Rotterdam. The development of these ports stresses the function of the Rhine delta as a gateway for transport between Western Europe and the rest of the world. It is expected that this function will continue to increase greatly in significance as the European economy expands further. A tendency for further heavy industry to settle near the coast must also be expected. In fact, an example is already to be found in the establishment and rapid growth of the blast-furnace complex at Velsen, with its steel works and their chemical subsidiaries. The advent of very large petrochemical plants on the New Waterway (Pernis and Botlek) is a further proof of the importance of an industry which must be served by deep water. The port and industrial area of Rotter-

dam displays a particularly spectacular growth. The Europort project for the handling of very large vessels such as supertankers is now in progress immediately on the coast. These projects will lead to still more considerable agglomerations in this area. Other industries are not immediately dependent on the great ports but, in view of supply and marketing, have to be located not too far away from the 'Randstad Holland'. Efforts are being made to make use of the periphery of the area for this purpose.

However, successful attempts have been made to develop industry in other parts of the country as well. This initiative can in part be tied in with industrialization tendencies already manifest (e.g. in North Brabant and Twente), whose origin lies in modern potentialities of power supply, transport, telecommunications, etc. It is all the more necessary to foster a wider distribution of suitable industries – mainly light industries in the metallurgical and chemical sectors dependent on the labour market – in areas with an existing or impending shortage of occupations outside agriculture. The modernization of farming methods is intensifying this process and creating a demand for complementary employment in industry in a large part of the country.

Since 1950 the Ministry of Economic Affairs has been aiding industrialization in a number of so-called 'development areas'. The large nylon factory at Emmen, in south-east Drenthe, is one of the examples of a successful effort in this direction. In 1958 this policy of distribution was set in a wider framework and made deliberately instrumental to the physical planning of the country as well. This plan now covers a number of what are called 'problem areas', i.e. areas suffering from severe depopulation or a particularly rapid population growth. These areas are much larger than the former development regions and cover for instance the entire north of the country, the whole province of Zeeland and a large part of eastern North Brabant and northern Limburg (Fig. 12).

The process of national distribution of industry must be carried out by means of regional concentration. Measures of support are therefore in principle confined to the centres designated for that purpose. On these centres will be concentrated the further measures in the interest of regional industrialization, such as the improvement of communications, the provision of housing, the provision of social and cultural facilities, etc. In many of these nuclei the entire environment will have to be improved before industrial concerns can be attracted or retained.

A general problem resulting from the persistent industrialization is created by the discharge of waste into the waterways and into the air. The density of the population and the water economy of the country make it difficult to find a solution for this problem, particularly in the western part of the country. Figure 13 shows the distribution of the industrial labour force by

Regional Industrialization (1960)

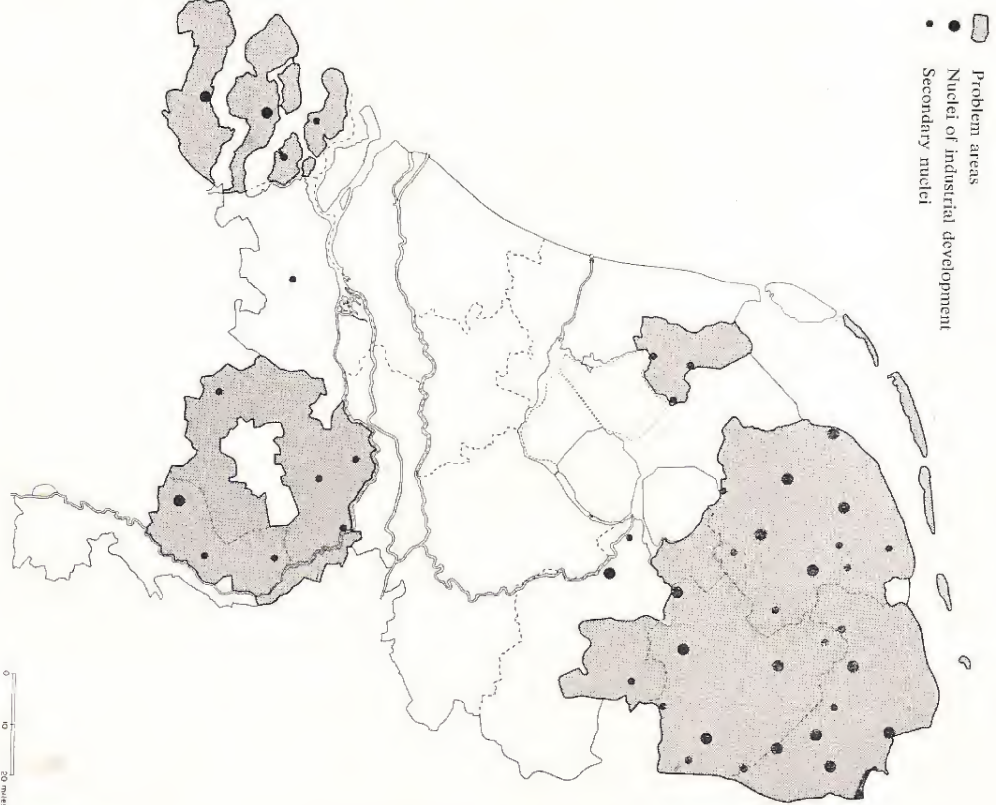


Figure 12

Distribution of the Industrial Labour Force per municipality (1947)



Figure 13

municipalities according to the 1947 census. The full significance of the decentralization pursued especially in subsequent years is of course not yet fully apparent from the map.

Housing

Holland is by now one of the most highly urbanized countries in the world. About 60 % of the population lives in towns of more than 20,000 inhabitants. The gravitation of employment from agriculture to industry and the provision of services are heading towards a situation in which 90 % or more of the population will be in non-agricultural occupations, i.e. towards further urbanization. In 1980 seven out of every ten Dutchmen will probably be living in towns of over 20,000 inhabitants. The 'Randstad Holland' alone, which has grown since the end of the last century to a complex of more than 4 million inhabitants (cf. Figs 8a and b), will then have a population of about 5.5 million.

The development of the Netherlands in the years to come will therefore be to a great extent a problem of the creation and expansion of towns, coupled with the rebuilding of old town centres and 19th century districts. Thanks to the extensive reclamation of land, room can be found for these considerable extensions without the total acreage under cultivation having to be reduced. Of course relative values have to be carefully weighed, particularly with a view to retaining the most productive soil. Certain limitations will also be necessary from the financial point of view regarding the availability of land for housing and road-building.

In the past the one-family house was the rule in Holland, except in the large and a few of the medium-sized towns. From 1950 onwards apartment blocks were introduced to an increasing extent (consisting mainly of 3 or 4 stories), even in a number of smaller towns. To a lesser extent multi-storey blocks have made their appearance, but not usually exceeding 12 stories. Recently, however, there has been renewed interest in the one-family house. This is particularly the case of the inhabitants of the larger cities, who are settling at some distance from the centres more and more by making the most of the good traffic connections.

Immediately after the war housing area density greatly increased everywhere. This was followed in the light of experience, however, by a drop, at least in the towns. In general, gross housing area density ranges from an average of 4 dwellings per acre in villages to 12-16 acre in medium-sized towns and 14-18 in large cities (including the usual local services). The questions regarding the most desirable forms of dwellings and the method of land allocation are being spotlighted. On the instruction of the Minister of Housing and Building a special study has been instituted into the matter of

multi-storey as opposed to conventional building from the points of view of both national housing and town planning on the one hand, and sociology on the other.

Recreation and protection of nature

In so densely populated a part of the world, almost three quarters of which is under cultivation, the preservation of natural regions obviously gives rise to difficult problems. It is true that since the beginning of this century a privately inspired movement has ensured the protection of about 2 % of the area of the country (170,000 acres) by purchasing it as nature reserves. But above and beyond this the need has been felt to protect interests in the field of natural science and of natural beauty and rural scenery with the means offered by physical planning. The ever-present need for intensification of agricultural soil utilization, coupled with the continuous extension of towns and villages by suburban estates and industrial settlements, forms a threat to what little natural scenery is left. And the countryside has also suffered from the necessity to earmark training grounds for a modern, motorized army.

This problem is becoming all the more urgent as the demand for recreational facilities in the open air grows. An inventory made by the Government Physical Planning Service of the type of land particularly suitable for recreation (woods, moors, dunes, etc.) indicates that the problems of facilities for recreation lie to a considerable extent in the west of the country. Here, within a very confined area, the requirements have to be satisfied of the millions who populate the 'Randstad Holland', together with those of many day-trippers and holiday-makers from other parts of the country, plus a steadily growing stream of tourists from abroad. The beaches and the big cities act more than anything else as magnets for all these visitors. The need for recreation in the open country is still undergoing a marked increase as a result of the continuous urbanization and likewise through the greater prosperity and the improved social provisions (holidays with pay, more leisure time, etc.). The introduction of a shorter working week also creates new problems for physical planning. In particular the need, already strongly felt, for facilities for weekend recreation assumes quite different forms. It is fortunate that the rivers and canals, lakes and ponds, of which there are a large number, provide extensive recreational facilities. The further development of these facilities, e.g. within the framework of the Yssel Lake and the Delta Plan works, is receiving more and more attention.

Transport

Although Holland already possesses a dense network of roads, railways and

waterways, the arterial road network will especially have to be extended. (Figs 14a and b). Work is being performed on a modern system of motorways linking up with the network of 'E' (for European) international highways.

For the further development of the great sea-ports extensive hydraulic works have been planned and are partly in course of construction. Moreover, the problems connected with roads and waterways are of course an important part of planning for industrial development, for reclamation, and for other forms of improvement of the effective agricultural area. The impolderings in the Yssel Lake and the implementation of the Delta Plan render possible important new routes to certain 'problem areas'. It stands to reason that the necessity of preserving valuable agricultural land and the little that is left of natural scenery demands here very wise judgment. Perhaps the last is even more necessary in the case of airport building and expansion, requiring vast areas of land in view of the present demands of aviation.

Water economy

Mention has already been made here and there of the part played by the water. But that element is so important and occupies such a predominant position among the country's problems as to be deserving of special mention. Formerly the accent was upon drainage, thus the struggle *against* the water. At the present time great importance is also attached to control, thus the struggle *for* the water, taking into account both quantity and quality. Qualitatively, all kinds of measures can be devised to check the ingress of salt: bringing fresh river water to the threatened point, shutting off the arms of the sea, protection of the fresh water reservoir under the dunes against exhaustion by the drinking water supply. This last measure necessitates among other things very expensive works for the transport of river water from the Lek to infiltration areas in the dunes. The measures taken to ensure healthy water also include the prevention or rendering innocuous of impurities emanating from residential and industrial areas. Particularly in the case of chemical plants, this may give rise to problems such that the location of the industry is at stake. Thus it is partly for this reason that the new soda plant is located on the coast (near Delfzijl).

As regards the quantitative control of the waters, the very largest quantities are required for the expulsion of salt and particularly for agriculture. For its supplies of fresh water the Netherlands is of course highly dependent on the rivers, especially the Rhine. For uniform distribution of the quantities supplied according to requirements, fresh-water storage basins are needed. The Yssel Lake is already used in this capacity; after completion of the Delta Plan the lake of Zeeland will also be available in the south-west.

Since Holland is so greatly dependent on the Rhine, international aspects also play an important part; a major factor is the pollution caused by waste water from German, French and other upstream mining and industrial areas.

Main Roads (1960)

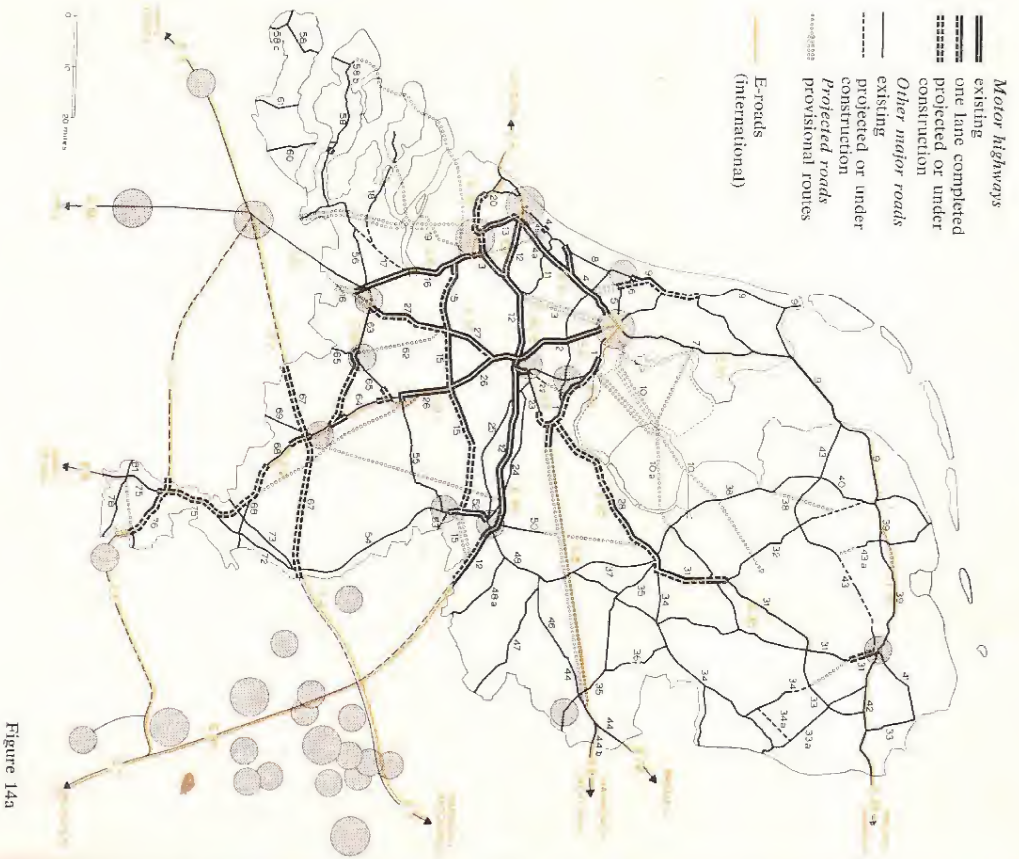


Figure 14a

Waterways (1960)



Figure 14b

Outside the Netherlands only waterways for barges of 1,350 tons and more are indicated.

Statutory regulations

The Netherlands is divided into 11 provinces and some 1,000 municipalities (Figs 13 and 15). The division of responsibilities between these bodies rests largely on the principle of decentralization, so that lower authorities are not only there to carry out the instructions of higher authorities, but have important powers of their own. Supervision over local government is, in the first instance, a matter for the provincial authority. The central government usually functions as a tribunal of appeal for the municipal authorities.

The organization of the planning work is adapted in this system of government. The present legislation in the field of physical planning therefore offers the possibility of *three types of plan*: municipal (or local authorities') plans, regional plans and national plans. The first group of plans are regulated by the Housing Act of 1901, and the other two by a temporary act of 1950. In the meantime a bill containing new legislation has been introduced into Parliament. Under this legislation the Housing Act will be confined to working-class housing, whilst the whole question of physical planning will be combined in one act (the Physical Planning Act). The plans have this in common, that they all regulate the use of the land within their purview, but they do so from the respective points of view of the municipality, the region concerned and the nation as a whole. With this in view they are arranged in order of rank, in the sense that the principles contained in the higher plans must be accepted and worked out in the lower. Subjects not regulated by higher plans are given a ruling by lower bodies in accordance with their own judgment, subject, of course, to approval from higher up. As a rule, only the lowest level of planning – that of the local authority – is directly binding on the public, for the reason that they cover a relatively small field and can thus produce the most accurate provisions. 'Zoning' or assignment of land according to these plans may be either in detail or on broad lines. The first is compulsory for land which is to undergo more extensive building in the near future.

For the actual *drawing-up* of the plans, large municipalities usually resort to their own town-planning services, while smaller ones avail themselves of the skills of private designers. Each province commands its own planning department, comprising expert staff in the field of research and lay-out work. Furthermore, committees fit into the framework of this department to represent the various interests of housing, agriculture, industry, recreation and the protection of nature, ways and works ('waterstaat'), etc. These committees deal with both regional and municipal plans. On the national level, a

similar organization exists, viz. the Government Physical Planning Service, consisting of a standing committee on which all interested ministries are represented, and of a bureau headed by a director. Since 1958 a Physical Planning Council formed from the Cabinet Council has been in existence at Government level, and is engaged in co-ordinating the broad outlines of policy in this field. The Chairman of this Council is the Prime Minister. The diagram in Figure 17 gives further details of this. One of the main points that comes to light is the fact that the agencies concerned – unlike the plans they deal with – are not hierarchically interconnected.

Final acceptance of the municipal plans is a matter for the local authority, subject to the approval of the provincial government, and to appeal to the Crown. Regional plans are accepted by the Provincial States ('country council'), subject to Crown approval. National plans are decided by the Crown direct (such plans, however, do not exist for the time being; see also page 33). In all cases, deposition of the plans for public inspection is compulsory and interested parties have the right to submit their objections both to the accepting and approving bodies. In the case of municipal and regional plans they also have the right of appeal. All these safeguards are evidence of the many efforts made to allow the public to play their part in the planning, both directly and through their representative bodies.

The usual *safeguard* is the prohibition of building not in accordance with a plan which has been approved by the local authorities. Moreover the Minister can object to the execution of building and other works not conforming to any plan, even if it is still in a preparatory stage. Interested parties can also have recourse to appealing to the Crown.

Basic material

For the determination of the use to which the land is to be put it is necessary not only that sufficient statistical data should be available (compiled by the Central Bureau of Statistics), but also, and primarily, a sound knowledge of the properties of the soil. In the struggle for efficient use of the land, the attention paid to the productive quality is of still greater importance than the occurrence of quantitative waste. It is for this reason that great store is set by soil surveys as a basis for planning work, viz. on the one hand soil mapping and on the other hand the examination of the soil's bearing capacity.

A special application of soil mapping is the investigation based thereon which has been in progress for some time with regard to the most suitable soils for the establishment of horticulture and market gardening, in consultation between the Ministry of Agriculture and Fisheries and the Government Physical Planning Service. This investigation correlates the possibilities of the soil with meteorological indications, transport conditions and other economic and town-planning considerations.

At the same time reliable maps on a sufficiently large scale are essential. In 1953 a start was made with the compilation of an accurate map (on a scale of 1 : 10,000), based on the results of photogrammetry. This map will also be used to put the land-use statistics on a sounder basis within a period of about ten years.

The present stage of the planning

Logically, one would expect lower-level plans to be based on the principles laid down against national and regional backgrounds. In actual fact the sequence of events has been reversed owing to the chronological precedence of the local plan, both legislatively and in practice.

This form of planning is now very generally established. Of the 1,000 municipalities, 70 per cent have a master plan which has been approved and 25 per cent have such a plan in course of preparation; only 5 % have no plan as yet.

In 1931, with the increasing realization since the First World War of the need for supra-municipal measures, the regional plan was introduced. At the present time 13 have been drawn up by the Provincial States, 12 of which have already been approved by the Crown. Roughly 45 are in the course of preparation (Fig. 15).

The plans drawn up and those in hand are either partial plans (i.e. plans for part of the provincial area) or 'facet' plans (i.e. plans for the protection of one particular interest, such as for example water catchment). Experience has shown that it is not really possible to deal with the whole province in one all-embracing plan.

Since 1941 a further aim was the drafting of *national plans*. However, it has proved to be beyond the realm of possibility to draw up a comprehensive plan for all Dutch territory.

The task of the Government Physical Planning Service is now therefore to build up a national planning policy, based on research into basic problems in the field of physical planning and on regular co-ordinative consultation with the special responsible ministries. As regards the overall aspects, this consultation takes place in the Standing Committee and also in co-ordinative committees within the jurisdiction of the ministries concerned, whilst personal contact also plays a large part.

A prime aspect of national physical planning is the high concentration of population in the west of the country, already mentioned above, and the fact that some parts of the country lag behind the others. The Government is trying to solve this problem by a decentralization policy, within the framework of which an important place is occupied by the distribution of industrialization (see page 21).

After the problem had been raised in a joint memorandum by the Government Physical Planning Service and the Central Planning Bureau, the Government gave instructions for development plans to be drawn up for the

The Progress of Regional Planning (1960)

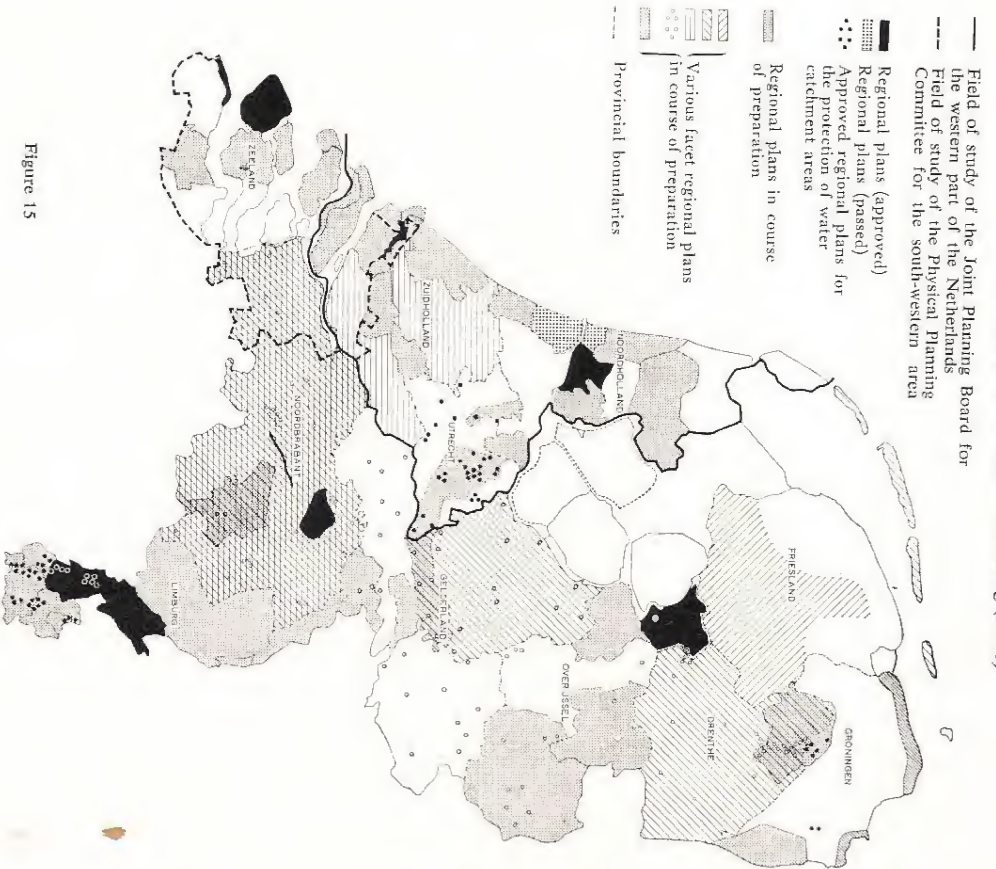


Figure 15

various regions of Holland in consultation with the provinces. Priority has been given to the north of the country, which is to be regarded in its entirety as one major problem area. National planning studies have meanwhile been completed for the concentration area in the west (see Fig. 8b). In 1958 a summarizing report was issued recommending the further development of the 'Randstad Holland'. In its 'Memorandum concerning Physical Planning in the Netherlands', presented in September 1960 to the Second Chamber of the States-General (or Lower House of Parliament), the Government re-stated the major directives of the above report concerning the future development of the 'Randstad Holland'. These major directives are as follows:

- diversion of development to areas outside the West in order to reduce the problems of congestion;
- in the 'Randstad Holland' itself: development of the urban ring with retention of the historic cities, as the major centres which should be kept physically separated;
- preservation of a large-scale agricultural area inside the ring of Randstad cities;
- expansion of the 'Randstad Holland' in a centrifugal direction;
- effective co-ordination of the plans for the 'Randstad Holland' and those for newly reclaimed areas in the Yssel Lake and the Delta area.

National planning is based also on specialized studies relating to the various sectors of physical planning. These are the result of both the work of the responsible ministries and of preparation by the Government Physical Planning Service. In the latter category are included various plan studies in the field of recreation. One such study is concerned with a form of recreation characteristic of Holland, the watery country.

Dutch waters — sea arms, rivers, lakes, canals — make it fortunately possible to make up to a certain extent for the deficiency of space for recreation purposes on dry land by providing recreative facilities on the water and on the banks. The aquatic sports enthusiast has by now been provided with a variety of interesting sailing routes (Fig. 16). This wide range can be increased still further by improving certain of the connecting links and also by taking advantage of the necessity of excavating sand for raising the level of building sites and roads, to form lakes as part of the general scheme.

Holland, as an aquatic sports region, will gain considerably in attraction with the completion of the Yssel Lake polders, to be followed by the additional inclusion in the routes of the various lakes left around the polder boundaries, so as to connect up the lake districts in the provinces of Friesland and Holland. Further to the south the Delta Plan also opens up considerable new prospects in the field of water sport. The aquatic sightseer will then have the choice of a great variety of routes whose characteristic landscape, old towns and villages and mighty modern powers are unsurpassed. These sugges-

Preparatory study for a national plan for aquatic sports

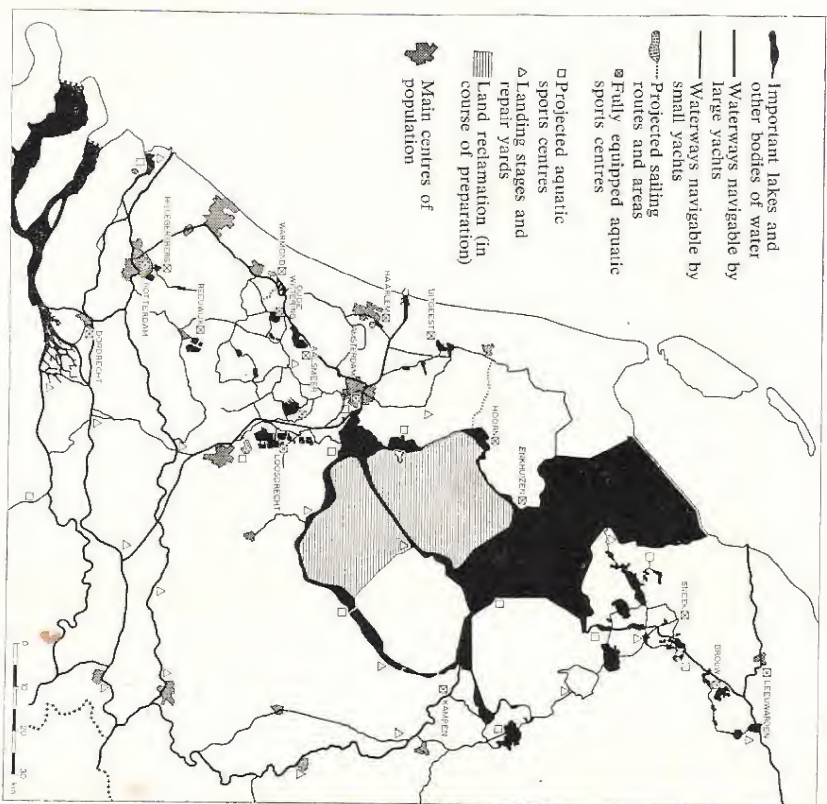


Figure 16

tions are completed by the plan study still being prepared of recreation on 'terra firma'. In this study preservation of existing possibilities and development of new ones go hand in hand. Its basis is the inventory mentioned on page 25 of natural and recreational areas in the various regions of the country, coupled with a census of various accommodation facilities (on the one hand hotels and boarding houses, on the other hand youth hostels, camping centres, rented bungalows, etc.). The accessibility of the recreational areas has also been examined.

Within the framework of studies on recreation I, ideas had already been worked out at an earlier stage for a national system of simple connecting roads (in particular cycle paths or ordinary country lanes), which are suitable for cycling holidays, and which lead via attractive routes from the major centres of population to the recreational areas. Despite the increasing motorization, the bicycle still plays an important part in Holland: there are about 5.5 million bicycles in use, or one for every two inhabitants. Furthermore, the number of motor-assisted bicycles ('Mopeds') is steadily increasing (in 1960 around 850,000).

The international aspect

Holland is a small country. But that is not the only reason why its planning problems extend beyond its frontiers. The various countries in this densely populated part of Western Europe are so dependent on each other that national planning has to take into account the measures applied to territories outside the Netherlands. One need only consider the interests involved when certain uses are assigned to the soil (including the water) in the drainage area of international rivers, international land traffic connections, or allocations and works of importance to international power supply. As the result of closer contact, existing measures could be developed into international planning on specific subjects. Moreover, international co-operation on an economic plane will increase the desirability of a collective examination of the consequences for land designation.

A start has already been made. In 1952 the Ministers, entrusted with physical planning in the three Benelux countries established a joint committee for these problems. This committee will make a comparative study of the legislation, of the planning research methods and of the planning methods themselves in the three countries, while every effort will be made to ensure that the planning activities in these countries are more closely attuned to each other. The committee has prepared a comparative survey of legal terminology in the field of physical planning. Further, it has published reports on the planning aspects of the Benelux tourist industry and on the problems of physical planning in the area along the Belgian-Dutch frontier. Other studies, including those relating to symbols on maps and physical planning projects and to methods of research, are still in progress.

But all this is only a beginning. As economic co-operation in Western Europe proceeds, Western European planning problems will become more and more clearly defined. Achievements in the economic sector are bound to be reflected in physical development, thus on the map of Europe; on the other hand measures in the sphere of physical planning will in many respects condition the success of the economic ideas. The Netherlands will not be fully satisfied unless this aspect of international co-operation is soon given the attention that it deserves.

List of Publications and Pamphlets on Physical Planning in the Netherlands

E = with summary in English.

F = with summary in French.

D = with summary in German.

* out of stock.

Government Memorandum concerning Physical Planning in the Netherlands (1960). D.

Published by the Government Physical Planning Service:

Publications

1. Study of the Reconstruction of the North Sea-side Resorts (1947).
2. Location tendencies in Dutch industry (1949). E.
3. The distribution of population in the Netherlands (1949). E.
4. Inquiry on holiday spending outside the place of residence in 1947 (1949).
5. Efficient holiday accommodation (1950). E.F.
6. First report of the Committee for Regional Population Forecasts (1953). E.
7. Occupation of land for non-agrarian purposes (1954). E.F.D. *
8. Two recreational studies with sociological background (1954). *
9. Recreation spaces in the Netherlands; the 'Veluwe' (1956). E.
10. Recreation on water (1956). E.D.
11. The west of the Netherlands – and the other provinces (1956). E.F.D.
12. Second report of the Committee for Regional Population Forecasts (1959). E.
13. Industrial land use in the Netherlands (1961). E.

Further reports

Annual Reports for 1946, etc.

Interim report on the development of the Agglomeration The Hague (1952).

The flooded area in the south-west of the Netherlands (provisional planning survey) (1953). E.F.

First interim report on the development of the flooded areas (analysis) (1954).

Planning consequences of the location of the dams in the Delta Plan, second interim report of the Planning Committee of the South-West (1955). E.

The development of the western part of the Netherlands (1958).

a. report.

b. explanations.

Social aspects of planning development in the south-western part of the Netherlands (1959).

Pamphlets

1. Notes on the staggering of holidays (1948). *

2. Notes for the calculation of the annual loss of agricultural land owing to urban expansion, road-building, etc. (1948). *

3. Economic development and distribution of population (1949). *

4. The development of the distribution of population in the Netherlands, especially in the West (1949). *

5. Basic and service industries (1952).

6. Development of population in the Western part of the country since 1950 (1960).

ORGANOGRAM OF PHYSICAL PLANNING

